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| 10/054,604      | 11/13/2001  | Takahiro Unno        | TI-29771            | 7107             |

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EXAMINER

OPSASNICK, MICHAEL N

| ART UNIT | PAPER NUMBER |
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2626

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/054,604  
Filing Date: November 13, 2001  
Appellant(s): UNNO, TAKAHIRO

**MAILED**

**JUL 25 2006**

**Technology Center 2600**

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Mr. Carlton H. Hoel  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed May 9<sup>th</sup>, 2006 appealing from the Office action mailed February 17<sup>th</sup>, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Applicant's Admitted Prior art, 10/054604, Drawings 2a-2b, specification, page 5, paragraph labeled "2.Encoder Details" to page 6, end of first full paragraph.

**(9) Grounds of Rejection**

Claims 1-2 have been indicated to be allowable over the prior art of record. As per independent claim 1, the limitations pertaining to the detailed structure of the perceptual layers of the encoder, along with the claimed feedback interconnectivity of the layers so that weaker filters are incorporated into the system as a function of the previous layer filter, is not explicitly taught by the prior art of record.

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of first full paragraph) in view of Gao et al (6961698).

As per claim 3, Applicant's Admitted Prior Art teaches a layered encoder with an estimator for each layer of a layered encoder and perceptual filters including inverse filters for each layer (Applicant's Admitted Prior Art - drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of first full paragraph). However, as discussed by this passage, Applicant's Admitted Prior Art does not explicitly teach varying the filtering such that one of the layer perceptual filters is weaker than that of another layer perceptual filter; however, Gao et al (6961698) teaches in a

variable rate encoder/decoder (fig. 1), the filtering varies among the different types of encoding/decoding → Fig 4, with Type 0 and Type 1, with different bits representing different stages, along with varying pulse codebook design in the fixed codebook, along with varying adaptive codebook structures; which is dictated by the rate selection and type classification (fig. 9); with the selector choosing among other types, an H type selector and F type selector (Fig. 2, subblocks 68 and 78); which, as further defined in Fig. 3, subblocks 90 and 92, wherein the filters are different from another, and especially, weaker (col. 54 lines 1-4). Therefore, it would have been obvious to one of ordinary skill in the art of speech encoding at the time the invention was made to modify the filtering, as taught by Applicant's Admitted Prior Art, with weakened perceptual filters because it would advantageously vary the filtering to accommodate perceptual features of speech while performing low bit rate encoding (col. 4 lines 35-64).

As per claim 4, the combination of Applicant's Admitted Prior Art (Drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of first full paragraph) in view of Gao et al (6961698) teaches a layered encoding signal with relatively weakened perceptual filters, as established in the rejection of claim 3 above. Furthermore, the combination of Applicant's Admitted Prior Art in view of Gao et al (6961698) teaches a decoding of a layered encoded signal (Gao, Fig. 1) wherein short term postfiltering differs for the number of layers decoded (col. 53 line 60 – col. 54 line 5 → a weaker postfilter impulse response is introduced at the second synthesis filter).

As per claim 5, the combination of Applicant's Admitted Prior Art (Drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of

first full paragraph) in view of Gao et al (6961698) teaches a layered encoding signal with relatively weakened perceptual filters, as established in the rejection of claim 3 above. Furthermore, the combination of Applicant's Admitted Prior Art in view of Gao et al (6961698) teaches a decoding of a layered encoded signal (Gao, Fig. 1) wherein the long term postfiltering is independent of the number of layers (Gao, col. 59 lines 23-36).

#### **(10) Response to Argument**

Appellants arguments filed May 9<sup>th</sup>, 2006 have been fully considered but they are not persuasive. On page 3 of the response, 3<sup>rd</sup> paragraph, lines 1-3, appellant argues that Gao does not teach differing filter strength among the different coders. Examiner respectfully disagrees and refers to the quoted section of Gao (6961698) col. 54, lines 1-6, wherein a weak short term spectral filter is introduced; wherein the added-in introduction of such filter is in the half-rate codec (col. 53 lines 59-66; the added-in weak spectral filter is an added feature compared to the other coding rates of Gao). Furthermore, the differing filter strength is demonstrated by the H type and F type selector (fig. 2, subblocks 68 and 78), further defined in Figure 3, subblocks 90 and 92, including the aspect of a weaker filter (col. 54 lines 1-4).

On page 3 of the response, 3<sup>rd</sup> paragraph, lines 4-7 appellant's argue that there is no suggestion of applying Gao to a layered coder because the approaches of Gao and layered coding conflict. Examiner respectfully disagrees and notes that the Gao reference is introduced at the filtering aspect of Applicant's admitted prior art, and not at the

coding-block level of Applicant's admitted prior art. In other words, the commonality to Applicant's Admitted Prior Art and the Gao reference is the filtering aspect within the coding of the input signal, and not the generic coding block arrangement as suggested by appellant. Furthermore, appellant's general allegation that Gao conflicts with layered coding fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Lastly, examiner notes that Applicant's Admitted Prior Art is relied upon to teach perceptual filtering, and not the Gao reference.

Arguments presented by appellant on page 3 of the response (4<sup>th</sup> paragraph until the end) refer back to arguments presented on page 3, 3<sup>rd</sup> paragraph, of the response; examiner respectfully disagrees and rebuts with the similar rationale as presented above against the arguments presented against claim 3. Examiner also notes that Fig. 1 of Gao has been presented to address the decoding aspect of claim 4, along with an explanation of the encoding process (being that the decoding process employs a similar process to recover the transmitted signal).

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Michael N. Opsasnick


Patent Examiner

Art Unit 2626


mno

July 19, 2006

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